

IN THE CLAIMS:

Please cancel claims 1-30 without prejudice.

Please add new claims 31-48:

31. An organic light emitting device having an emissive layer comprising an organometallic compound, wherein the organometallic compound consists of

a metal having an atomic number of at least 72;

at least one mono-anionic, bidentate, carbon coordination ligand bound to the metal;

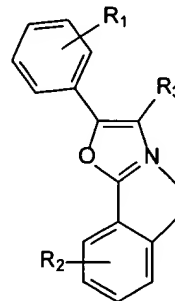
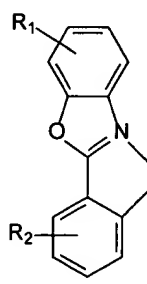
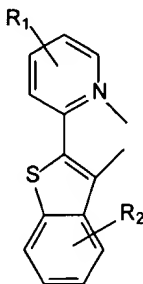
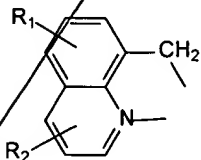
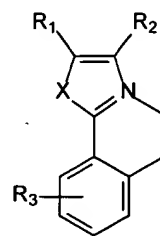
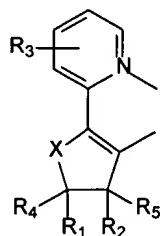
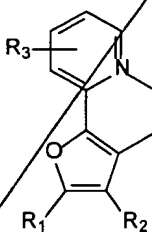
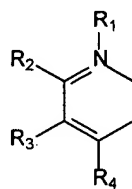
and

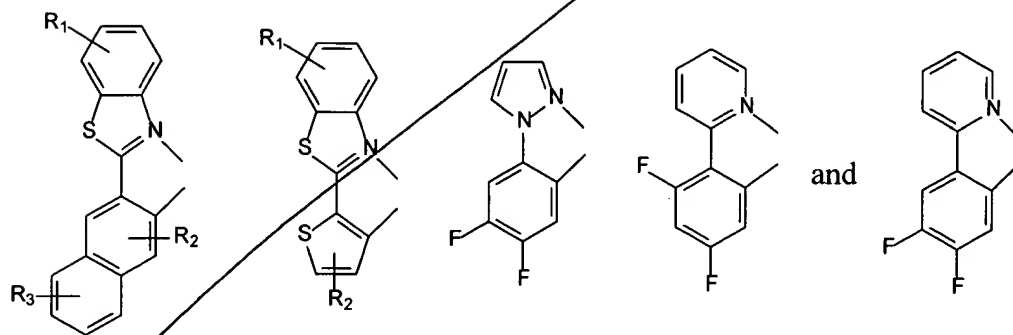
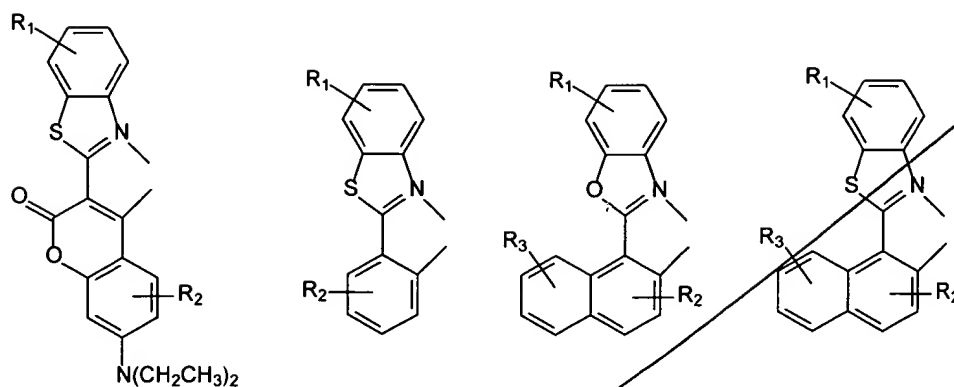
at least one non mono-anionic, bidentate, carbon coordination ligand bound to the

metal,

wherein the mono-anionic, bidentate, carbon coordination ligand is selected from the

group consisting of

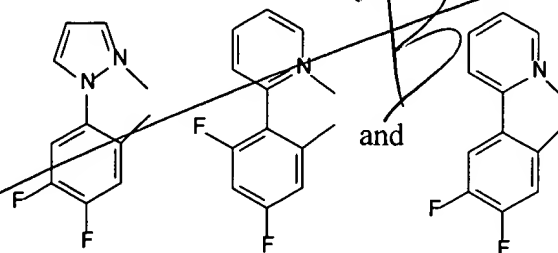




wherein X = S or O; and

R_1, R_2, R_3, R_4 and R_5 are, independently, hydrogen, halogen, alkyl, or aryl.

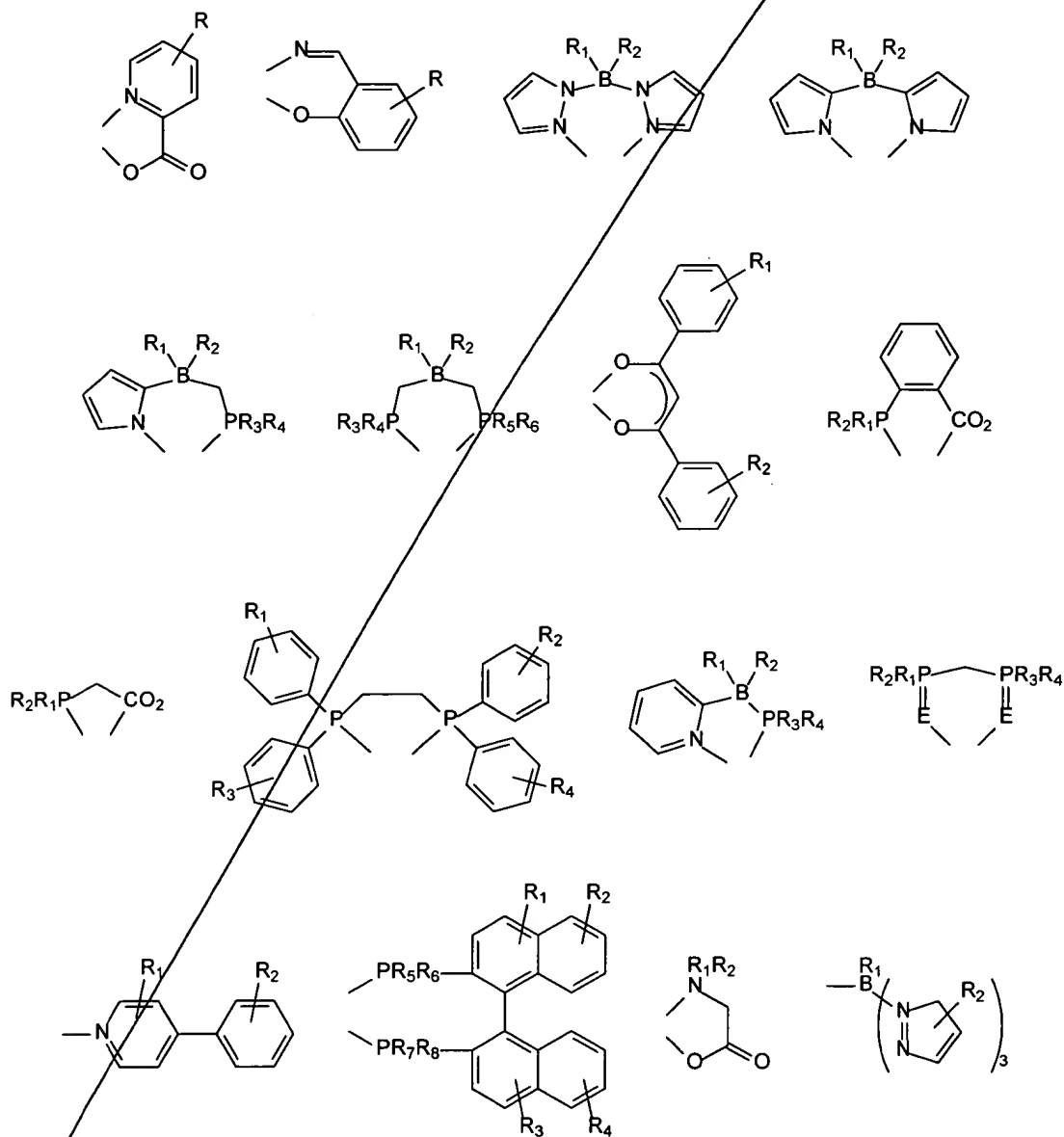
32. The organic light emitting device of claim 31, wherein the mono-anionic, bidentate, carbon coordination ligand is selected from the group consisting of

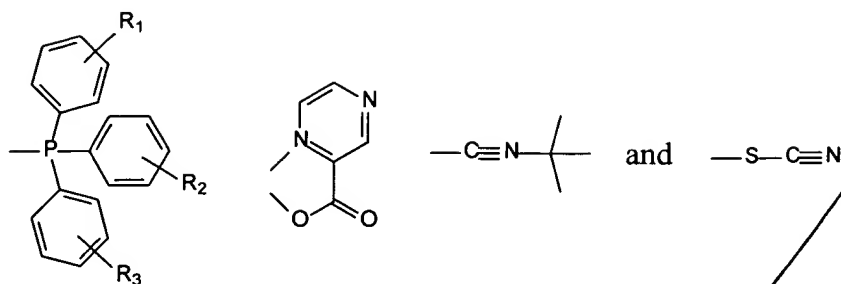


33. The organic light emitting device of claim 31, wherein the heavy metal is selected from the group consisting of Os, Ir, Pt and Au.

34. The organic light emitting device of claim 33, wherein the heavy metal is selected from the group consisting of Ir and Pt.

35. The organic light emitting device of claim 31, wherein the non mono-anionic, bidentate, carbon coordination ligand is selected from the group consisting of

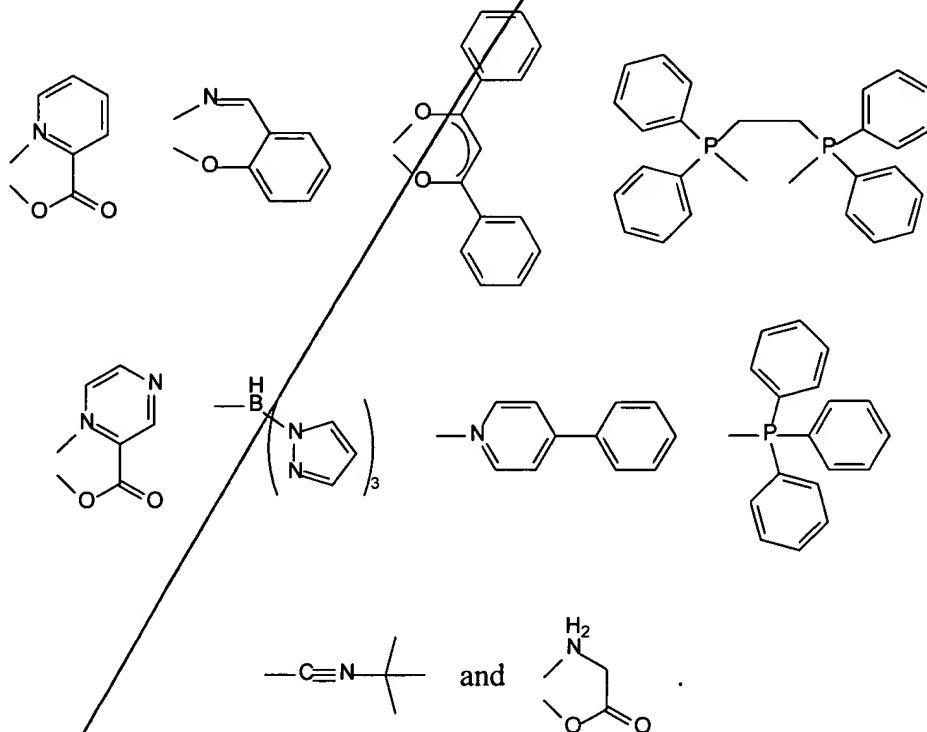




wherein E is selected from the group consisting of O, S, Se and Te; and

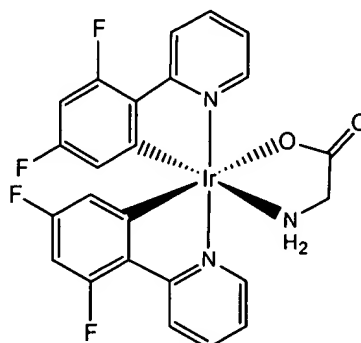
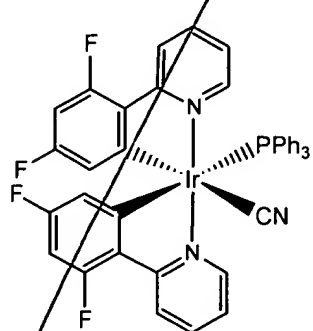
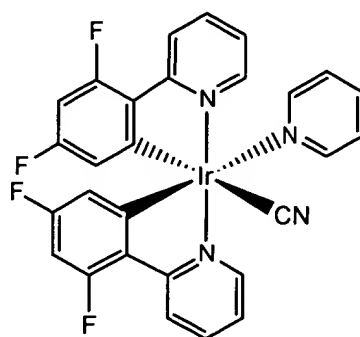
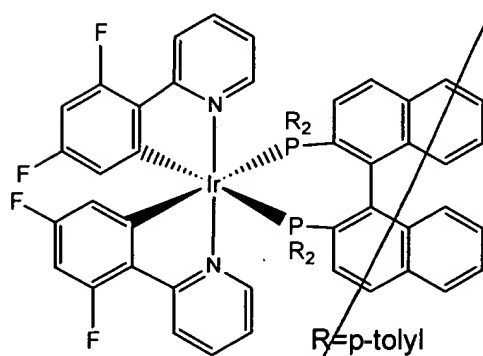
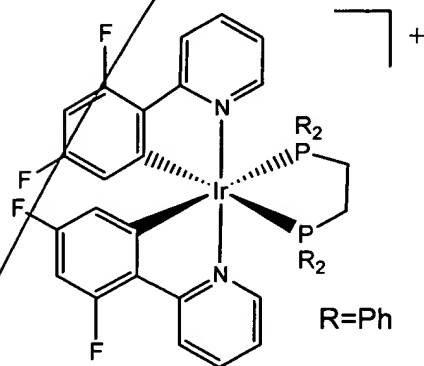
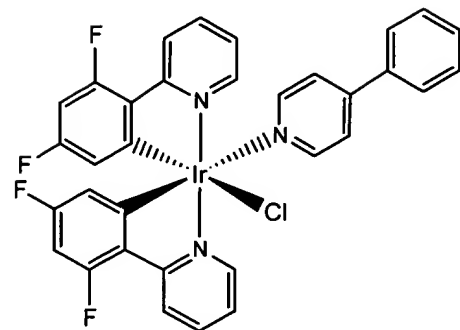
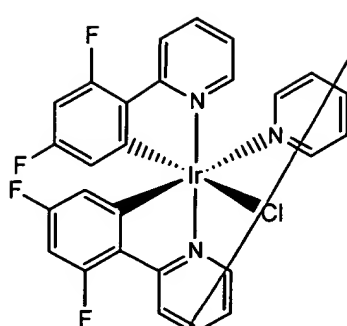
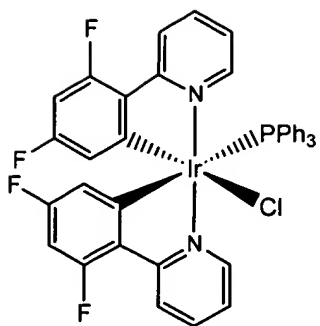
R_1 , R_2 , R_3 , R_4 , R_5 , R_6 , R_7 and R_8 are, independently, hydrogen, halogen, alkyl, or aryl.

36. The organic light emitting device of claim 35, wherein the non mono-anionic, bidentate, carbon coordination ligand is selected from the group consisting of

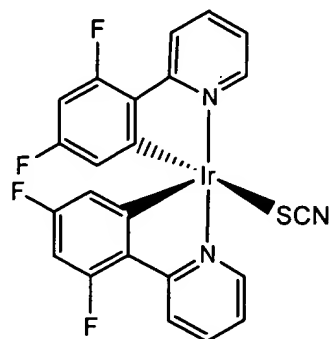
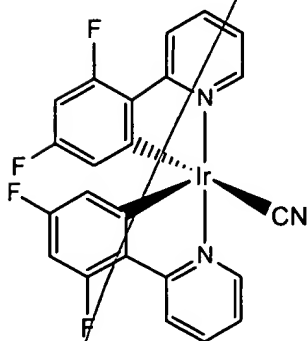
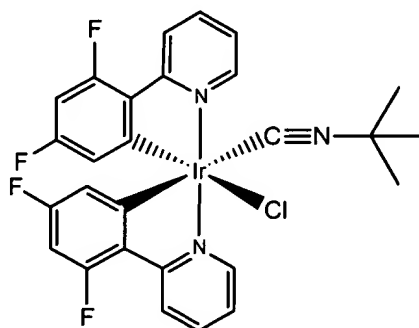
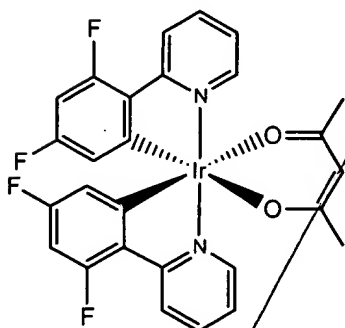
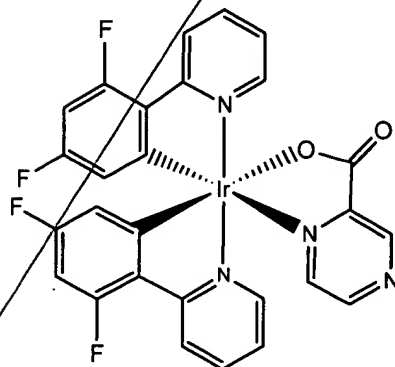
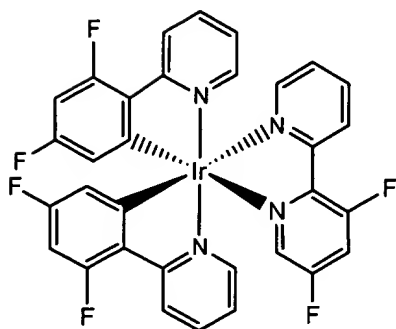
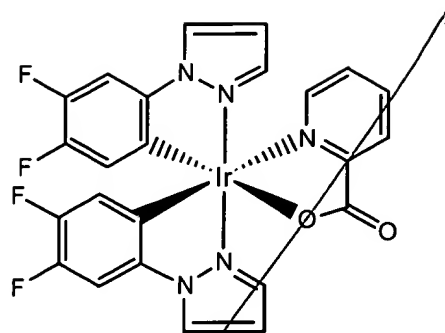


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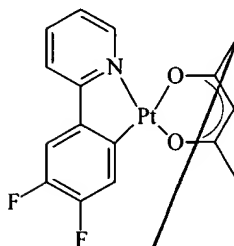
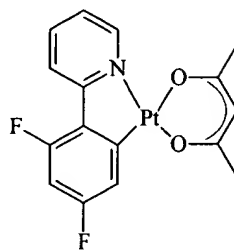
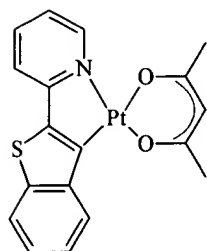
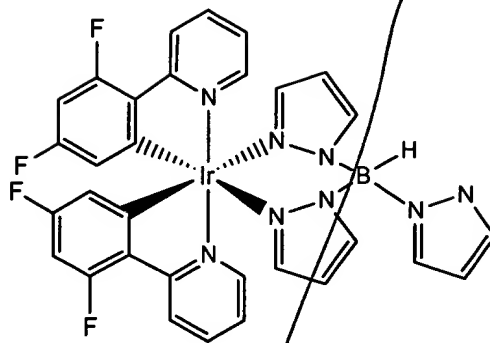
34. The organic light emitting device of claim 31, wherein the organometallic compound has the chemical structure represented by a formula selected from the group consisting of



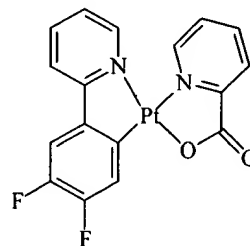
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35. The organic light emitting device of claim 31, wherein the emissive layer further comprises:
a host material having a lowest triplet excited state having a first decay rate of less than about 1 per second, wherein the organometallic compound is present as a guest material dispersed in the host material, the organometallic compound having a lowest triplet excited state having a radiative decay rate of greater than about 1×10^5 per second and wherein the energy level of the lowest triplet excited state of the host material is lower than the energy level of the lowest triplet excited state of the organometallic compound.

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36. The organic light emitting device of claim 35, wherein the energy difference between the lowest triplet excited state of the organometallic compound and a corresponding relaxed stated of the organometallic compound has a corresponding wavelength of about 420 nm to 480 nm for

blue light emission.

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37. The organic light emitting device of claim ³⁸35, wherein the energy difference between the lowest triplet excited state of the organometallic compound and a corresponding relaxed state of the organometallic compound has a corresponding wavelength of about 480 nm to 510 nm for aqua-blue light emission.

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38. The organic light emitting device of claim ³⁸35, wherein the host material has a bandgap with an energy difference corresponding to about 470 nm and the organometallic compound has a lowest triplet excited state at an energy level at about 450 nm.

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39. The organic light emitting device of claim ³⁸35, wherein the host material is an electron transport layer.

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40. The organic light emitting device of claim ³⁸35, wherein the host material conducts electrons primarily through hole transmission.

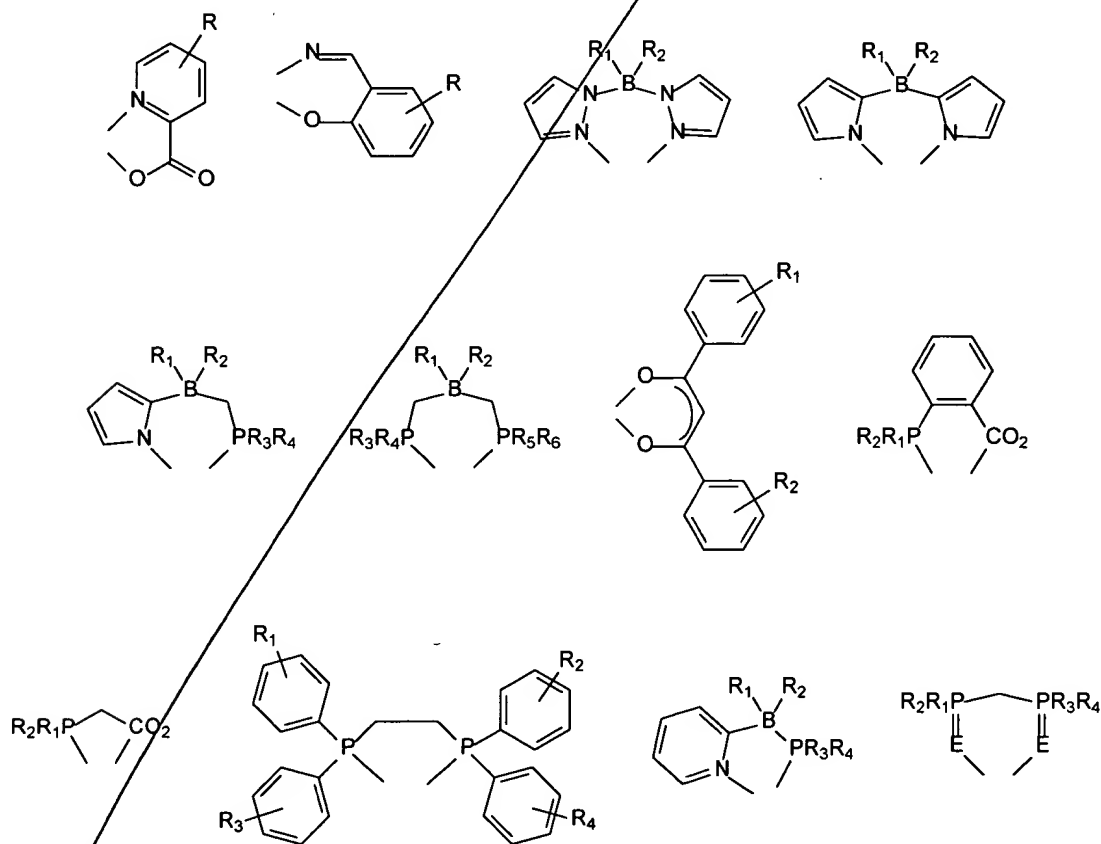
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41. The organic light emitting device of claim ³⁸35, wherein the ratio of the host material and organometallic compound decay rates is at least about 1:1000 to about 5:1000.

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42. The organic light emitting device of claim ³⁸35, wherein the host material is TPD.

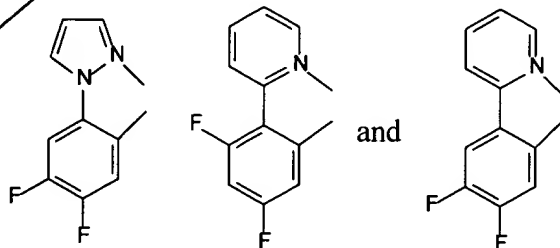
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43. The organic light emitting device of claim ³⁸35, wherein a plurality of organometallic compounds are dispersed in the host material.

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- 41 44. An organic light emitting device having an emissive layer comprising an organometallic compound, wherein the organometallic compound consists of
- a metal having an atomic number of at least 72;
 - at least one mono-anionic, bidentate, carbon coordination ligand bound to the metal;
 - and
 - at least one non (mono-anionic, bidentate, carbon coordination) ligand bound to the metal,
- wherein the mono-anionic, bidentate, carbon coordination ligand is selected from the group consisting of



- R26
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46. The organic light emitting device of claim ~~44~~⁴⁷, wherein the heavy metal is selected from the group consisting of Os, Ir, Pt and Au.
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47. The organic light emitting device of claim ~~46~~⁴⁹, wherein the heavy metal is selected from the group consisting of Ir and Pt.
- 51
48. The organic light emitting device of claim ~~44~~⁴⁷, wherein the mono-anionic, bidentate, carbon coordination ligand is selected from the group consisting of



REMARKS

By the current amendment, claims 1-30 have been canceled and new claims 31-48 have been added. No new matter has been added by this current amendment.

The Office Action of March 12, 2003 and the references cited therein have been carefully studied and, in view of the foregoing amendments and following remarks, reconsideration and allowance of this application are most respectfully requested.

The specification was objected to because of the following informalities: the first page of the specification does not reference the applications for which priority is claimed under 35